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BACKUP PLAN FOR EASTERN REGION OFFICES

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SUMMARY OF REVISIONS: This supplement supersedes Eastern Region Supplement 03-2003, "Backup Plan for Eastern Region Offices", filed with NWSI 10-2201, dated February 5, 2004. Changes include unifying short-fuse, long-fuse, and digital service backup into a paired-office method.

<signed> December 6, 2004

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Director, NWS Eastern Region

Table of Contents: Page

1. **Purpose.** National Weather Service (NWS) field offices provide forecast and warning services to a variety of users. This Supplement provides a backup plan with detailed instructions for Eastern Region (ER) offices when they cannot provide those services.

2. **Background.** The previous backup plan was formulated during an era when forecasts were primarily text-based, forecasting weather conditions in a phrase or short sentence structure. With the introduction of digital database technology, and resulting text and table products, backup procedures must be adapted to allow backup offices to perform their mission.

   Backup for short-fused products, long-fused products, hydrological products, the digital database, and products derived from the digital database will involve primary and secondary pairs. Interactive Forecast Preparation System (IFPS) will have the capability to ingest grids from any office at the central server, allowing backup offices to start with a complete database rather than a 'clean slate'. However, each Weather Forecast Office (WFO) will share primary and secondary responsibility with a nearby office allowing for increased collaboration and familiarization with smart tools and similar forecast methodologies. Tables detailing primary and secondary backup responsibility are outlined in Backup Assignments.

   The paired-backup method for short-fused products, long-fused products, hydrological products, the digital database, and products derived from the digital database, is shown on the Backup Map. The pink arrows denote primary backup pairs, while blue arrows denote secondary backup pairs.

   Backup for the Area Outline product (SLS) will be provided by the office designated in the SLS Backup Table. The SLS is scheduled to be discontinued in early 2005.

   Appendix A contains a listing of long-fused, hydrological, and digital database products. Appendix B contains a listing of short-fused and aviation products.

3. **Operations.** Planned backup operations will be coordinated in advance by the office requesting backup. However, the following are some examples which may prompt immediate implementation of backup:

   - Emergency evacuations
   - Site communications or power failure
   - Critical equipment failure

   Designated backup offices listed in the appendices will provide forecast and warning services until normal office operations at the affected office are restored.

Offices providing backup will provide services consistent with normal operations and take into account additional workload, the weather, and the available resources (personnel and equipment). During backup operations, additional personnel may be required to be called in or held over. Secondary backup or temporary duty at the backup office are other available options to alleviate the increased workload.

4. **Aid and Support.** Written instructions cannot cover every situation. Personnel must use judgment and initiative, evaluating situations on a case by case basis to ensure continuation of essential services. The first obligation of personnel in a disabled office is to safely restore operations as quickly as possible. Beyond that, they will provide support to assist offices providing backup services as much as possible. This may include obtaining data sets via alternative methods, providing draft products, soliciting and relaying real-time ground truth severe weather reports, or providing NOAA Weather Radio (NWR) broadcasts.

For hydrological backup, the servicing River Forecast Centers (RFCs) will attempt to collect sufficient amounts of data to continue making river forecasts. The RFC(s) will rely on direct and indirect automated data sources. This includes data collected through **ROSA** (Remote Observation System Automation), **CADAS** (Centralized Automatic Data Acquisition System), **HADS** (Hydrometeorological Automated Data System), **IFLOWS** (Integrated Flood Observing and Warning System), **ASOS** (Automated Surface Observing System), and **ALERT** (Automated Local Evaluation in Real Time) systems.

The RFC's Hydrometeorological Analysis and Support (HAS) function will be responsible for ensuring that the WFOs performing Hydrological Service Area (HSA) backup are aware of all available RFC products and guidance pertaining to the HSA they are supporting. This includes QPF, river forecast guidance, and flash flood guidance. Coordination between the RFC and the WFOs performing HSA backup should be accomplished using HMD and HCM messages, collaboration tools, or telephone conversations.

On a case by case basis, personnel should evaluate situations to determine if both the Long-fused and Short-fused programs need support, or if only one program needs to be transferred.

5. **Verification.** Real-time verification of warnings and dissemination of damage reports is considered part of the backup process, and falls under the responsibility of the offices providing backup warning services. Post-storm verification responsibility is ultimately the responsibility of the office requesting backup.

6. **Procedures.** An office requiring backup will contact its Initial Contact Office (ICO). The ICO is then responsible for notification and ensuring backup initiation by all appropriate backup offices, including the servicing RFC(s).

The ICO will issue an initial AWIPS message under the AWIPS ID ERHADMERH, addressed to ALL. The message will identify all involved backup offices, contain notice that an office has become disabled, and request affected backup offices initiate backup services. Other pertinent and factual information should be included, such as the reason for the outage, along with the expected time of return to normal operations, if known.

After the ICO imports configuration files for IFPS backup, the ICO will wait 5 minutes for the IFPS server to start on their backup workstation. After the 5 minute waiting period, the ICO will send another AWIPS message under the ERHADMERH header instructing affected offices to send their grids using the Send ISC (InterSite Coordination) GUI. Other update notices may be issued by the ICO under the ERHADMERH header as additional information becomes available.

In addition, ERH will be paged by the ICO when *unscheduled* service backup is initiated following the procedures outlined in ERS 04-2004, Eastern Region Headquarters Significant Event/Emergency Notification Requirements and Procedures.

ALL offices with backup responsibility (Backup Assignments) will contact the ICO to confirm receipt of the initial message. The ICO will log these calls and make any additional contacts to ensure all offices are aware of their backup responsibilities.

If the outage results in the evacuation of the building, the office requesting backup will provide the ICO with a telephone number where they can be reached (e.g., a cellular telephone number, the home telephone number of one of the management team or staff, etc.). An evacuation because of a bomb threat or fire will **not** be announced in AWIPS messages, including those under the ERHADMERH header.

For hydrologic backup, the WFO's Service Hydrologist (SH), or other knowledgeable forecaster from the affected office, may need to relocate to the backup WFO during an extended service outage. This may be necessary during anticipated heavy rain or high water conditions, particularly if the service outage will be greater than 48 hours.

Once normal operations have been restored, the office which required backup will issue an ERHADMERH message advising backup offices that it is resuming normal operations. This must be done even if resumption occurs on or before the expected time given in the first ERHADMERH message. It is highly recommended that the office which required backup follow-up the notification with a telephone call.

Example 1

WFO Mt. Holly NJ (PHI) must evacuate the forecast office due to a tree falling through the roof during a severe thunderstorm. WFO PHI must contact its ICO, WFO LWX. WFO PHI must provide an alternate telephone, in case WFO LWX must contact them. WFO LWX will notify their other backup offices listed in Backup Assignments, via an ERHADMERH AWIPS message, and log calls as appropriate backup offices telephone to acknowledge receipt of the message, and advise that they are initiating their portion of the backup plan.

Here is the preferred content of the initial ERHADMERH message:

NOUS71 KLWX 061305
ADMERH

ALERT ADMINISTRATIVE MESSAGE
NATIONAL WEATHER SERVICE BALTIMORE MD/WASHINGTON DC
805 AM EST WED NOV 6 2002

TO: WFOS CTP BGM OKX ERH MARFC
FROM: WFO LWX

WFO PHI HAS REQUESTED BACKUP. PLEASE CALL LWX TO ACKNOWLEDGE RECEIPT OF THIS MESSAGE.

A TREE FELL THROUGH THE ROOF AT WFO PHI DURING A THUNDERSTORM, AND THEY ARE UNABLE TO CONTINUE NORMAL OPERATIONS. THEY HAVE EVACUATED THE WFO. WFO LWX HAS BEEN PROVIDED A NUMBER, IN CASE ANYONE NEEDS TO CONTACT THEM.

IT IS UNKNOWN AT THIS TIME WHEN NORMAL OPERATIONS WILL RESUME.

PLEASE PREPARE TO SEND ISC GRIDS. A FOLLOW UP MESSAGE WILL BE SENT WHEN WFO LWX IS READY TO RECEIVE ISC GRIDS.

WFO LWX will contact any backup office that does not call them to acknowledge receipt of the ERHADMERH message.

Example 2
If WFO Pittsburgh PA (PBZ) requires service backup, the WFO providing long-fused backup, and thus HSA backup, is WFO Charleston WV (RLX). The Ohio River Forecast Center (OHRFC), the servicing RFC, will gather sufficient data to continue making river forecasts for the PBZ service area. RLX will then issue required hydrologic products based on the OHRFC forecast issuances. The backup office will maintain preformatted products for this purpose. During an extended service outage at PBZ, or when flooding is occurring, it may be necessary to relocate the SH, or other qualified forecaster, from PBZ to RLX to provide the necessary operational support.

7. **Dissemination.** Offices will follow procedures in NWSI 10-1701, and associated Supplements, regarding formatting procedures in the Mass Media Headers, as per the following example:

FPUS51 KPHI 062030
ZFPPHI

ZONE FORECAST PRODUCT
NATIONAL WEATHER SERVICE MOUNT HOLLY NJ
ISSUED BY NATIONAL WEATHER SERVICE BALTIMORE MD/WASHINGTON DC
330 PM EST WED NOV 6 2002

8. **Readiness.** Offices will maintain all instructions related to backup, including pertinent sections of all backup office's Station Duty Manuals and product schedules. Offices will maintain lists and contacts for emergency management, SkyWarn, and Cooperative Observers. These items will be maintained as part of the Station Duty Manual. All offices should also be familiar with their backup office's operational programs, SmartTools, and text formatters.

It is the responsibility of each office to ensure that its backup offices have been provided all necessary items, as outlined above, to accomplish backup successfully. At a minimum, offices should review backup operations annually.

9. **RFC Backup.** RFCs will develop procedures and maintain the capability of continuing core operations off-site in the event their current facility becomes uninhabitable (e.g. fire, etc.). These off-site backup operations should utilize modernized RFC systems as much as possible. The location of each RFC's off-site backup will be determined by the availability of computer resources, access to data, and ability to disseminate products. Each RFC will also maintain a procedure to continue core operations on-site in the event of a major systems failure (e.g. loss of AWIPS). Core operations are defined as those essential to produce all products and services needed to protect lives and property.

Within the first 24 hours of an RFC failure requiring off-site backup, each WFO is responsible for providing essential hydrologic services without RFC guidance. Essential services include issuing hydrologic watches, warnings, and statements.

If the RFC failure is expected to last beyond 24 hours, operations should be relocated to the off-site location. Off-site operations will require RFC personnel to TDY to the new location to implement procedures and issue forecasts. If the RFC failure occurs during a high water situation, the RFC may place staff at affected WFOs to assist handling the event.

10. **NOAA Weather Wire Service (NWWS).** NWWS products originate from all NWS WFOs and RFCs utilizing the Advanced Weather Information Processing System (AWIPS). Products are redundantly sent to multiple RFC offices for uplink to a communications satellite. A map of Primary and Secondary uplink assignments for all WFOs is located at http://www.nws.noaa.gov/nwws/poster01.pdf.

The satellite then downlinks these products to Master Ground Station # 1 in Alexandria, VA, for further distribution by Computer Sciences Corporation (formerly DynCorp) in Chantilly, VA. NWWS also receives back-up support from the AWIPS Network Control Facility (NCF) for weather warnings.

11. **Weather Support for Nuclear Power Plants.** Appendix B in ERS 05-2004, Weather Support for Hazardous Material Release, Response and Recovery, lists the WFO that provides primary or backup weather support to nuclear power plants.

Appendix A - Long-Fused Backup Products

Long-fused backup includes the digital database, products derived from the digital database; the WHFS database; products derived from the WHFS database; and long-fused watch, warning, and advisory products. The following list contains designated long-fused text products:

- Zone Forecast Product (ZFP)
- Tabular State Forecast Product (SFT)
- Area Forecast Discussion (AFD)
- Area Forecast Matrix (AFM)
- Coded Cities Forecast (CCF)/Point Forecast Matrix (PFM)

- Coastal Waters Forecast (CWF)
- Surf Zone Forecast (SRF)
- Nearshore Waters Forecast (NSH)
- Open Lakes Forecast (GLF)
- Coastal Flood Watch, Warning, Statement (CFW)
- Hurricane Local Statement (HLS)
- Marine Weather Statement (MWS)*
- Coded Marine Verification Forecast (MVF)

- Flood Watch (FFA)
- Flood Warning (FLW)*
- Flood Statement including Urban/Small Stream Flood Advisory (FLS)*
- Daily River and Lake Summary (RVD)

- Fire Weather Forecast (FWF)
- National Fire Danger Rating System Forecast (FWM)
- Fire Weather Watch/Red Flag Warning (RFW)

- Non-Precipitation Watch, Warning, Advisory (NPW)
- Winter Weather Watch, Warning, Advisory (WSW)
- Watch County Notification Message (WCN)
- Hazardous Weather Outlook (HWO)
- Special Weather Statement (SPS)*

- Daily Climatological Report (CLI)
- Regional Weather Roundup (RWR)

- Civil Emergency Message and other non-weather related emergency messages (CEM)*
- Public Information Statement (PNS)*

Products annotated with a (*) may be either short-fused or long-fused, depending upon the content of the message. The Daily Climatological Report (CLI) will only contain maximum and minimum temperatures and daily liquid precipitation when in service backup. Daily snowfall will be provided if available.

Appendix B - Short-Fused Backup Products

The following list contains designated short-fused products:

- Airport Weather Warning (AWW)
- Terminal Aerodrome Forecast (TAF)
- Transcribed Weather Broadcast (TWEB)
- Notification Report (OAV) for Aviation

- Special Marine Warning (SMW)
- Marine Weather Statement (MWS)*
- Notification Report (OAV) for Marine

- Flash Flood Warning (FFW)
- Flash Flood Statement (FFS)
- Flood Warning (FLW)*
- Flood Statement including Urban/Small Stream Flood Advisory (FLS)*

- Severe Thunderstorm Warning (SVR)
- Tornado Warning (TOR)
- Severe Weather Statement (SVS)
- Local Storm Report (LSR)

- Short Term Forecast/NOWcast (NOW)
- Special Weather Statement (SPS)*

- Civil Emergency Message and other non-weather related emergency messages (CEM)*
- Public Information Statement (PNS)*

Products annotated with a (*) may be either short-fused or long-fused, depending upon the content of the message.